MODEL OF FLYING-MACHINE INVENTED BY DR. C. A. SMITH OF SAN FRANCISCO.

It looks just like the business end of a rocket. It has a conical point, a round body and at the rear end a brass fan whirrs lustily every time a live wire is hitched on to the electric motor in the interior of the concern. Two wings, like those of a beetle, rise and fall from the top of the cylinder, and a few small windows and three rudders make up the latest of flying machines.

Will work? There is no doubt of it, say the inventors, and they point proudly to the model as it rests on two stools in a shop on Market street. The model is built of zinc, aluminum was not available in time, and to serve as a propellor one of those brass electric fans, a contrivance like a four-bladed ship's wheel, has been attached to the main shaft. Inside is an electric motor of one-eighth of one horsepower and that is calculated to drive the propelling wheel at the rate of 1500 revolutions a minute. At every 100 revolutions of the screw the two wings rise from the sides of the cylinder, stretch themselves for a second like the wings of a bird in full flight and then return again to the sides of the machine. In full career these will make between fifteen and twenty strokes a minute, and borne onward by wing and screw the machine is expected to make between 75 and 100 miles an hour.

Figures so far make up the principal portion of the description of the machine, and from the results figured out the inventors draw much satisfaction. In length the cylinder will be sixty feet, and the cone, which forms the forward end, forty-five feet, making a total length of 105 feet. It will be thirty-nine feet in diameter, and will have a capacity of 89,593 cubic feet of hydrogen. Hydrogen at the earth's surface has a lifting power of seventy pounds to the 1000 cubic feet, which makes the lifting power of the gas inclosed in the machine something near 6230 pounds.

Aluminum will be the metal used in the big airship. In all there will be 16,846 square feet of sheet aluminum used, and this weighs one pound to sixteen square feet, or a total of 1053 pounds. Then there will be an aluminum engine, braces to stiffen the various parts and incidentals to bring the weight up to slightly over 2000 pounds. This gives a lifting power of about 4100 pounds without the use of either wings or screw.

In the forward end, just where the under side of the cone merges into the cylinder, the pilot-house is situated, and from it is controlled the three rudders at the rear end. One of these is a big plane set horizontally and destined to control the elevation; the others are vertical planes which will drive the machine to the right or left. The wings can be made to remain outspread or folded at the desire of the helmsman, and arrangements will be made to have the bird-like engine balanced to a nicety.

Its flight, say the inventors, will be swift and even, like the swoop of an eagle or the steady course of a bird of prey. It will soar at a height of from one to three miles, and will have a grappling-hook to stay its speed when it becomes necessary to alight and it dives down toward the earth.

A working model, that is so far as the mechanical part is concerned, will be on exhibition in the Mechanics' Pavilion. The model has just been finished. Its first long flight will be to New York, and the inventors say that forty hours after it spreads its wings over the Golden Gate it will alight under the shadow of the Statue of Liberty.